



**U.S. Department of Energy**  
**Office of River Protection**

**P.O. Box 450  
Richland, Washington 99352**

01-OSR-0224

Mr. Ron F. Naventi, Project Manager  
Bechtel National, Inc.  
3000 George Washington Way  
Richland, Washington 99352

Dear Mr. Naventi:

**CONTRACT NO. DE-AC27-01RV14136 – OFFICE OF SAFETY REGULATION (OSR)  
QUESTIONS ON THE LIMITED CONSTRUCTION AUTHORIZATION REQUEST**

Reference: BNI letter from A. R. Veirup, to M. K. Barrett, ORP, "Contract No. DE-AC27-01RV14136 – Request for Review and Approval of the Limited Construction Authorization Request for the River Protection Project," CCN 020503, dated June 5, 2001.

The OSR has developed the attached review questions on the Bechtel National, Inc. (BNI) Limited Construction Authorization Request (LCAR) submitted in the reference letter. The OSR intends to promptly review your responses to the questions, when received, to prepare a safety evaluation report for the LCAR. Please direct any questions to Mr. Lew Miller of my staff on (509) 376-6817.

Nothing in this letter should be construed as changing the Contract, DE-AC27-01RV14136. If, in my capacity as the Safety Regulation Official, I provide any direction that your company believes exceeds my authority or constitutes a change to the Contract, you will immediately notify the Contracting Officer and request clarification prior to complying with the direction.

Sincerely,

Robert C. Barr  
Safety Regulation Official  
Office of Safety Regulation

OSR:RAG

Attachment

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-001-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? <u> X </u>	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: P. Carier</b>
<b>Description:</b>  <i>Review Guidance:</i> Section 3.2.3.3, Regulatory Acceptance Criteria, requires a description of a program that includes a Construction Occurrence Reporting Plan and that this plan should be consistent with incident reporting and investigation standards.  <i>LCAR Reference:</i> Section 5, Notification, Categorization and Consequence Assessment, references several SRD Safety Criteria, DOE Manual 232.1-1A, and several ISMP requirements. In some cases the referenced material is followed by a brief description of its applicability. These references provide a description of general requirements relevant to incident reporting and investigation for limited construction. However, the material provided in the section did not describe how these requirements interrelate and how these requirements formulate the elements of a Construction Occurrence Reporting Plan (Table S7-1 deliverable) discussed in Section 3.2.4, Review Procedures, of the LCAR Review Guidance.  <i>Question:</i> In order to verify the adequacy of BNI’s Construction Occurrence Reporting Plan (or portions thereof applicable to limited construction), please explain:  What types of incidents will be addressed under the program for limited construction? What are the criteria for reporting incidents (i.e., reporting thresholds)? What methodology will be used to notify the appropriate regulatory authorities? When will incidents be reported (timeliness criteria)? How will incident reports be initiated, reviewed, and approved? How will incidents be investigated? How will incident causes be determined and appropriate actions identified, tracked and implemented? How will BNI assign responsibility with regard to incident reporting and investigation?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-002-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? <u> X </u>	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: K. Chen</b>
<b>Description:</b>  <i>Review Guidance:</i> Section 2.3.3, Regulatory Acceptance Criteria, of the review guidance requires the description of the excavation-related design of important to safety buildings with sufficient information to ensure that the excavation will be adequate. This information includes soil compaction criteria.  <i>LCAR Reference:</i> Section 1.3.1.2.5, Soil Compaction Testing, of the LCAR states that one of the standards used for soil compaction testing is ASTM D2922, titled as “Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)”.  <i>Question:</i> Standard ASTM D2922 is one of the implementing standards listed in Safety Criterion 4.1-2 of the Safety Requirements Document (SRD). However, the title for ASTM D2922 in the SRD is “Standards Test Method for Laboratory Determination of Moisture Content of Soil”. What is the correct standard and title?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-003-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u> X </u>	<b>Reviewer: K. Chen</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section 2.3.3, Regulatory Acceptance Criteria, of the review guidance requires the description of the excavation-related design of important to safety buildings with sufficient information to ensure that the excavation will be adequate. This information includes the demonstration that soil bearing capacity will be sufficient to support buildings.</p> <p><i>LCAR Reference:</i> Section 1.4, Potential for Design Changes, of the LCAR states that the BNI geotechnical investigation report confirms that the site soil conditions have adequate capacity to support these building loads without significant deflections and indicates that the soil is capable of sustaining significantly greater bearing loads than those estimated. When the final seismic analysis is completed, estimated soil loads will be replaced by calculated loads and confirmed to be acceptable.</p> <p><i>Question:</i> What is the scope of the final seismic analysis discussed above? Will future construction activities, beyond those as described in the current LCAR, be performed before completion of the final seismic analysis?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-004-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b> Protection Information? ____ Proprietary Information? ____ Team Accepted? <u>  X  </u>	<b>Date to Contractor: 6/19/01</b> <b>Date of Response:</b> <b>Date Closed:</b> <b>Reviewer: K. Chen</b>
<b>Description:</b> <i>Review Guidance:</i> Section D of the review guidance, requires that the information on the design and installation of mud mats for the process buildings be provided. <i>LCAR Reference:</i> Section 1.3.1.3, Mud Mat Placement, of the LCAR states that the acceptability of the mud mat material is confirmed through testing to ensure that backfill requirements are met. <i>Question:</i> What are the testing requirements for the mud mat?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-005-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u> X </u>	<b>Reviewer: R. Garrison</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section D items 2 and 15.</p> <p>...BNI should provide a complete description of all LCAR activities for which authorization is requested. This description should include the following:</p> <p>2. Temporary facilities and services installed under the LCA; drawings may be included or referenced.</p> <p>15. Design, design change, and modification processes for activities performed during the LCA.</p> <p><i>LCAR Reference:</i> Section 1.3.2.1 p7, section 1.3.3.7 p11, and section 1.4 p13.</p> <p>1.3.2.1...Utility trenches will be excavated to allow installation of pipelines shown... Portions of the permanent electrical duct bank system shown...will also be installed to the extent practical to facilitate expediting the construction schedule. No ITS duct banks will be installed</p> <p>1.3.3.7...No permanent power cables will be installed during limited construction. Construction power will be routed in temporary concrete-encased duct banks, spare conduits in permanent non-ITS duct banks, and by overhead power distribution lines around the perimeter of the storage and laydown areas as shown...</p> <p>1.4...The most likely source of changes initiated within the project would result from ongoing redesign...Installations that are scheduled to be completed during limited construction that could be impacted by these ongoing design activities are as follows:</p> <ul style="list-style-type: none"> <li>• Primary Facility Excavations</li> <li>• Permanent Underground Utilities</li> </ul> <p><i>Question:</i> It is likely that during the lifecycle of the facility, the location of abandoned in place temporary components will be required for completion of facility modifications. How will temporary installations that will be abandoned in place, be documented sufficiently to prevent interferences with future installations? Are temporary installations that will be abandoned in place included in the baseline design, or will they be added by change notice at the time of abandonment?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-006-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>  X  </u>	<b>Reviewer: Y. Gibbons/M. Black</b>
<b>Description:</b> <p><i>Review Guidance:</i> Section 2.3.3, Regulatory Acceptance Criteria, of the review guidance requires the description of the excavation-related design of important to safety buildings with sufficient information to ensure that the excavation will be adequate.</p> <p><i>LCAR Reference:</i> Section 1.3.1.2.1, of the LCAR states that a geotechnical engineer will monitor the excavation process, inspect the in-situ soil to confirm that sub-grade conditions are consistent with the data contained in the Geotechnical Investigation Report.</p> <p><i>Question:</i> What are the required qualifications for the geotechnical engineer monitoring the excavation? How will the geotechnical engineer document that the sub-grade soil conditions are consistent with the data contained in the Geotechnical Investigation Report?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-007-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>  X  </u>	<b>Reviewer: R. Gilbert</b>
<b>Description:</b>  <i>Review Guidance:</i> Section E.1.3.3 states “BNI provides an event logic network showing the limited construction critical path activities.”  <i>LCAR Reference:</i> The LCAR transmittal letter states “Current baseline schedules including activities within the scope of this LCAR are provided in Attachment 3.” Attachment 3 provides a Level 3 schedule of procurement and construction activities from October 2001 through August 2007. Predecessor and successor activities are identified; however, critical path and logic are not clearly identified.  <i>Question:</i> What is the critical path through construction authorization, and the logic for the critical path activities? What are the project impacts associated with delaying proposed LCAR activities? Why are specific activities defined in the LCAR required before construction authorization?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	



<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-008-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u> X </u>	<b>Reviewer: R. Gilbert</b>
<b>Description:</b>  <i>Review Guidance:</i> Section D states the description of activities in the LCAR for which authorization is requested should provide “Discussion of the potential for design changes that may require rework of installations scheduled to be completed during limited construction activities.”  <i>LCAR Reference:</i> Section 1.4 describes the potential for design changes including the most likely source, redesign of the pretreatment facility. This section states changes will be captured in the project change management process. After approval of the LCAR, required authorization basis changes will be processed according to RL/REG-97-13, Regulatory Unit Position on Contractor-Initiated Changes to the Authorization Basis.  <i>Question:</i> What is the planned sequence and timing for resolving the potential redesign of the pretreatment, LAW pretreatment, and analytical laboratory portions of the facility? When will associated Authorization Basis Change Requests be submitted? How will changes to the activities planned during limited construction be reviewed by BNI and provided to OSR to assess the impact to the authorization basis?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-009-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>  X  </u>	<b>Reviewer: F. Han</b>
<b>Description:</b>  <i>Review Guidance:</i> Section 2.3.3, Regulatory Acceptance Criteria, of the review guidance states that the footprints and elevation of the compacted sub-grades for buildings should be provided.  <i>LCAR Reference:</i> Appendix A of the LCAR provides related drawings for the LCAR construction activities.  <i>Question:</i> The elevations of building foundations are typically based on the elevation above sea level for Hanford Site facilities. The LCAR package uses grade as 0 feet elevation but does not provide the reference to the above sea level elevation. This could result in uncertainty in the true elevations of various foundations. How will true elevations be established?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-010-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? _X_	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: F. Han</b>
<b>Description:</b>  <i>Review Guidance:</i> Section 2.3.3, Regulatory Acceptance Criteria, of the review guidance requires the description of the excavation-related design of important to safety buildings with sufficient information to ensure that the excavation will be adequate.  <i>LCAR Reference:</i> Section 1.2.1, Primary Process Facilities, of the LCAR states that loads on the base mat will be distributed uniformly to the surface being excavated as part of the LCAR scope. In the same paragraph, the LCAR also states that the soil interface will be prepared to a point of readiness for structural work.  <i>Question:</i> What is the technical basis for the statement that loads on the base mat will be distributed uniformly to the surface being excavated? What is meant by “soil interface will be prepared to a point of readiness”?	
<b>Contractor Response:</b>   	
<b>Disposition:</b>   	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-011-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u> X </u>	<b>Reviewer: F. Han</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section 2.3.3, Regulatory Acceptance Criteria, of the review guidance requires the description of the excavation-related design of important to safety buildings with sufficient information to ensure that the excavation will be adequate.</p> <p><i>LCAR Reference:</i> Section 1.3.1.2.3, Excavation, of the LCAR states that a soil retention system may be installed, extending below the elevation of the open cut excavation. These sheet piles may remain in place, as a form for the construction of the concrete walls.</p> <p><i>Question:</i> The deepest opening of the excavated area is in the pretreatment building (approximately 50 feet below grade). Driving sheet piles to such depth may result in potential large out-of-plumb construction. Further, after the sheet piles are installed, the soil within the surrounded sheet piles needs to be excavated. This again will result in certain deflection in the sheet piles due to soil pressures from the outside. With the construction tolerance and deflection from soil pressure, potentially large displacements of the sheet pile from its original plumbing line may occur. What impact do these deflections have on foundation and wall design?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-012-Q</b>	<b>Date Opened: 6/11/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>  X  </u>	<b>Reviewer: A. Hawkins</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section 3.1.3.3, "Regulatory Acceptance Criteria," of the review guidance states, "The LCAR must commit to an approved QAP for limited construction. BNI's QAP for limited construction is acceptable if...it describes an acceptable QA program for the identified limited construction activities that can be implemented."</p> <p><i>LCAR Reference:</i> The LCAR uses the terms "QA Program" and "QA Manual." "QA Manual" is understood to be QAM-24590-01-00001. "QA Program" is not defined, and its definition is not clear from the BNI usage. For example, Section 3.2, "Quality Assurance," states, "The QA Program will be approved by OSR..." As submitted by BNI, OSR is reviewing the QA <u>Manual</u> for possible approval. This section also states, "QA Program section numbers may change due to program revisions." The sections of the QA <u>Manual</u> are based on the standard (NQA-1) selected by BNI, and should remain consistent.</p> <p><i>Question:</i> How is the term "QA Program" defined?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-013-Q</b>	<b>Date Opened: 6/11/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u> X </u>	<b>Reviewer: A. Hawkins</b>
<b>Description:</b> <i>Review Guidance:</i> Section 3.1.3.3, "Regulatory Acceptance Criteria," of the review guidance states, "The LCAR must commit to an approved QAP for limited construction. BNI's QAP for limited construction is acceptable if...it describes an acceptable QA program for the identified limited construction activities that can be implemented." <i>LCAR Reference:</i> Section 3.4.1 of the LCAR states, "Grading will be accomplished through application of varying depth, methods, and responsibility for inspection activities as appropriate to the importance of the item or activity." The QA Manual (Policy Q-02.1) describes a grading process that considers a number of risk factors that do not include "...depth, methods, and responsibility for inspection activities." <i>Question:</i> What process will be used to define the scope, depth, and rigor of the application of QA requirements (grading)?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-014-Q</b>	<b>Date Opened: 6/12/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u> X </u>	<b>Reviewer: A. Hawkins</b>
<b>Description:</b> <i>Review Guidance:</i> Section 3.1.3.3, "Regulatory Acceptance Criteria," of the review guidance states, "The LCAR must commit to an approved QAP for limited construction. BNI's QAP for limited construction is acceptable if...it describes an acceptable QA program for the identified limited construction activities that can be implemented." <i>LCAR Reference:</i> The QA Manual requires (Q-15.1, "Control of Nonconforming Items"), "Nonconforming items that are subsequently re-worked, repaired, or replaced are to be inspected and/or tested to either the original requirements or to specified alternative requirements." The LCAR requires (Section 3.4.1, "Nonconforming Items"), "Reworked and repaired items will be inspected, tested, or reviewed in accordance with original requirements or approved alternate requirements, respectively." <i>Question:</i> What is the approval process for alternate requirements?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-015-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>X</u>	<b>Reviewer: A. Hawkins</b>
<b>Description:</b> <p><i>Review Guidance:</i> Section 3.1.3.3, "Regulatory Acceptance Criteria," of the review guidance states, "The LCAR must commit to an approved QAP for limited construction. BNI's QAP for limited construction is acceptable if...it describes an acceptable QA program for the identified limited construction activities that can be implemented."</p> <p><i>LCAR Reference:</i> Section 1.3.3.3 of the LCAR states, "A materials testing laboratory and office will be located within the concrete operations area for ready access to concrete production activities. The materials testing laboratory and office is not an ITS SSC. However, the laboratory will perform ITS testing of soils during limited construction as described in Section 1.3.1.2.5." (Note also that Section 1.3.1.3 of the LCAR states: "The installation of the mud mats is not an Important to Safety activity. <u>However, inspection of the mud mats is quality related and is part of the authorization basis.</u>")</p> <p><i>Question:</i> To what extent will the materials testing laboratory service: (a) be evaluated and qualified by BNI before use and (b) follow the approved quality program?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	



<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-016-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? _X_	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: A. Hawkins</b>
<b>Description:</b>  <i>Review Guidance:</i> Section 3.1.3.3, “Regulatory Acceptance Criteria,” of the review guidance states, “The LCAR must commit to an approved QAP for limited construction. BNI’s QAP for limited construction is acceptable if...it describes an acceptable QA program for the identified limited construction activities that can be implemented.”  <i>LCAR Reference:</i> The sub-section entitled “Subcontract Administration” within Section 3.4.1 states: “Subcontractors performing important to safety activities are required to have an approved quality program appropriate to the work, or will work directly to the WTP QA Program.” <ul style="list-style-type: none"> <li>• If implementing an approved subcontractor quality program, activities will be verified to be in compliance with contract quality requirements by Quality Assurance or Quality Control through audit, surveillance, and document review, as appropriate.</li> <li>• If working to the WTP QA Program, activities will be performed to the appropriate construction procedures with monitoring and inspection by Field Engineering and Quality Control as specified therein.”</li> </ul> <p>The BNI QA program does not describe any difference in the oversight provided for subcontractors working to their own QA program and those working to the BNI QA program.</p> <p><i>Question:</i> Why would important-to-safety activities performed by subcontractors who work to the WTP QA Program not also be subject to “audit, surveillance, and document review, as appropriate” in addition to monitoring and inspection?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for the Contractor</b>
<b>Question #: 01-LCAR-017-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? <u> X </u>	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: N. Kaushal</b>
<b>Description:</b>  <b>Review Guidance:</b> <i>Section E 2.33 Regulatory Acceptance Criteria states in part “... submittal is acceptable if it sufficiently describes ... bases for any work activities in the LCA scope that are considered important-to-safety.”</i>  <i>LCAR Reference:</i> Section 1.3.3.2 states “ the batch plant ... will utilize qualification testing to establish its ability to produce consistent quality concrete.”  <i>Question:</i> What facilities will be used for this concrete qualification testing?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for the Contractor</b>
<b>Question #: 01-LCAR-018-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>  X  </u>	<b>Reviewer: N. Kaushal</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section E 2.3.3-Regulatory Acceptance Criteria, first paragraph, states that “BNI should identify and describe the following important-to-safety features as they apply to the LCAR submittal.”</p> <p>Per item 8 of the same section, “capability of the civil testing laboratory to <b><u>repeatedly and reliably</u></b> perform tests to verify that important-to-safety attributes ... conform to the design requirements” (emphasis added).</p> <p><i>LCAR Reference:</i> Section 1.3.3.3-Materials Testing Laboratory and Office, provides a short statement about the materials testing laboratory.</p> <p><i>Question:</i> How will the capability of the materials testing laboratory be established to “repeatedly and reliably” perform tests?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-019-Q</b>	<b>Date Opened: 06/11/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>  X  </u>	<b>Reviewer: J. Polehn</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section 6.0, Radiation Protection Program, of the review guidance requires the submittal to adequately reference and commit to an approved Radiation Protection Program (RPP). The RPP, Rev. 7 (Section 6) refers to a Radiological Control Program.</p> <p><i>LCAR Reference:</i> Section 4.1 [Radiation Protection Program for Construction], last sentence, "SRD Safety Criteria 5.0-1 and 1.0-10 and ISMP Section 2.3 are applicable to the RPP for Design and Construction." SRD SC 5.0-1 states, "The RPP-WTP Radiological Controls Program shall address all items in 10 CFR 835 and the additional Safety Criteria provided in SRD Volume II Sections 5.1 and 5.2." In Attachment 2 of the LCAR, Comment/Question # 00-LCAR-021-Q, the response states, "The RCP has been cancelled." The two LCAR statements are inconsistent.</p> <p><i>Question:</i> How will BNI comply with SRD SC 5.0-1?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-020-Q</b>	<b>Date Opened: 06/12/01</b>
<b>Place "X" if answering "yes":</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? _X_	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: J. Polehn</b>
<b>Description:</b>  <i>Review Guidance:</i> Section D, Information Required in the LCAR, item 16, "BNI should provide a complete description of all LCAR activities for which authorization is requested. This description should include the following:....16. Results of pre-LCA radiological surveys and radiological sampling."  <i>LCAR Reference:</i> Attachment 5, LCAR-Review Guidance matrix, specifies that LCAR Review Guidance item D.16 is addressed by LCAR Section 4.2. Section 4.2, Radioactive Contamination Detected During Construction states, "BNI does not intend to perform additional site characterization and will establish a monitoring program initially based on the characterization specified in HNF-2067." HNF-2067 contains data obtained prior to disturbance of the site.  <i>Question:</i> What specific plans does BNI have for radiological surveys and sampling during limited construction? What radiological surveys and sampling did CH2MHill, or other contractors, conduct during site clearing and infrastructure work and what were the results?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-021-Q</b>	<b>Date Opened: 06/14/01</b>
<b>Place "X" if answering "yes":</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? _X_	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: J. Polehn</b>
<b>Description:</b>  <p><i>Review Guidance:</i> Section 3.2.3.3.1, Regulatory Acceptance Criteria, of the review guidance requires BNI to develop and commit to a suitable standard for incident reporting and investigation for limited construction that is consistent with the requirements of Section 3.2.3.2.</p> <p>Section 3.2.3.2, Regulatory and Contractual Requirements, of the review guidance states, "Additional relevant requirements are included in the SRD, Section 7.7, "Reporting and Incident Investigation," specifically SRD Safety Criterion 7.7-1 through 7.7-9. The description of BNI's incident reporting and investigation standard and implementing program should reflect implementation of the SRD criteria in a manner appropriately tailored to the limited construction phase."</p> <p><i>LCAR Reference:</i> Attachment 5, LCAR-Review Guidance Matrix, identifies that the elements of the LCAR Review Guidance for Incident investigations are addressed in LCAR Section 5. Section 5 states, "Radioactive materials will not be required to perform limited construction." That section also states, "...incident investigation requirements contained in SRD Safety Criteria 7.7-1, 7.7-2, and 7.7-3 are not applicable to limited construction activities. Incident investigation procedures will be developed consistent with DOE Manual 232.1-1A, Section 5.5, for use during limited construction activities."</p> <p><i>Question:</i> During the OSR/BNI meeting of June 12, 2001, BNI indicated that there was the potential to utilize radiographic sources (i.e., radioactive materials) during limited construction activities. Since major accidents (e.g., death, over-exposures, etc.) can occur involving use of radiographic sources, what will be the Notification, Categorization and Consequence Assessment process for an incident investigation with radioactive materials (e.g., radiographic sources) used during limited construction and why does SRD SC 7.7-1 through 3 not apply to limited construction activities?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-022-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u> X </u>	<b>Reviewer: K. Scown</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section 2.3.3.4 Regulatory Acceptance Criteria, requires "The excavation of the fire protection system that may be installed during LCA, including sufficient information to ensure that the installed underground portions of the system will meet seismic requirements, as well as the system performance requirements related to the excavation, if any. The submittal should include objective evidence that appropriate quality has been, or will be, applied to designing, constructing, installing, and testing the underground firewater system to meet the corresponding SRD requirements.</p> <p><i>LCAR Reference:</i> 1.3.2.1.1 Fire Water (Activities 0009, 0010, and 0024), paragraph 2 states "The portions of the main fire protection yard loop being installed during limited construction will provide the water source for permanent facility sprinkler systems and hose stations. These lines will be 12 inch PVC piping. The system is sized to provide sprinkler coverage to the most demanding sprinkler system (assumed to be 0.2 gpm/ft<sup>2</sup> for 3000 ft<sup>2</sup>), plus 500 gpm for hose streams, at the most remote location. A hydraulic analysis will be prepared by a qualified fire protection engineer, based on the requirements of UBC and NFPA 24. As the fire protection system evolves, the size of individual sprinkler systems will be limited to ensure the capacity of the supply system is not exceeded."</p> <p><i>Question:</i> When will the fire water system plans, as described in NFPA 24-95 Section 1-4, be submitted for approval by the Authority Having Jurisdiction (AHJ)?</p> <p><i>Question:</i> Drawings in the previous LCAR submittal indicated the fire water supply main would be 14 inches. What is the basis for the 12-inch pipe size?</p> <p><i>Question:</i> What is the flow required for the most demanding sprinkler system?</p> <p><i>Question:</i> What is the bases for the assumption of 0.2 gpm/ft<sup>2</sup> for 3000 ft<sup>2</sup>?</p> <p><i>Question:</i> What is meant by "...sprinkler systems will be limited to ensure the capacity of the supply system is not exceeded."?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-023-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? <u> X </u>	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: K. Scown</b>
<b>Description:</b> <i>Review Guidance:</i> Section 2.3.3.4 Regulatory Acceptance Criteria, requires “The excavation of the fire protection system that may be installed during LCA, including sufficient information to ensure that the installed underground portions of the system will meet seismic requirements, as well as the system performance requirements related to the excavation, if any. The submittal should include objective evidence that appropriate quality has been, or will be, applied to designing, constructing, installing, and testing the underground firewater system to meet the corresponding SRD requirements.  <i>LCAR Reference:</i> 1.3.2.1.1 Fire Water (Activities 0009, 0010, and 0024), paragraph 4, states SRD Safety Criterion 4.5-13 implementing standards are DOE-STD-1066,...DOE G-440.1,... and NFPA 801,...”  <i>Question:</i> What is the revision/code of record of the standards/documents that will be utilized?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	



<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-024-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u> X </u>	<b>Reviewer: K. Scown</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section 2.3.3.4 Regulatory Acceptance Criteria, requires "The excavation of the fire protection system that may be installed during LCA, including sufficient information to ensure that the installed underground portions of the system will meet seismic requirements, as well as the system performance requirements related to the excavation, if any. The submittal should include objective evidence that appropriate quality has been, or will be, applied to designing, constructing, installing, and testing the underground firewater system to meet the corresponding SRD requirements.</p> <p><i>LCAR Reference:</i> 1.3.2.1.1 Fire Water (Activities 0009, 0010, and 0024), paragraph 3 states "The permanent portions of the fire water system installed during limited construction will be in accordance with SRD 4.5-13."</p> <p><i>Question:</i> NFPA 801-98, Section 4-4 Supply Mains and Hydrants, 4-4.2 requires "Each hydrant shall be equipped with a separate shutoff valve located on the branch connection to the supply main." A review of the drawings submitted with the LCAR and those identified as Issue for Bid (IFB) did not indicate there would be individual shutoff valves. Will hydrant isolation valves be provided as required by NFPA 801-98?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-025-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>X</u>	<b>Reviewer: J. Yedidia</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Item 4 of Section E-1.3.3, Regulatory Acceptance Criteria, requires that there be sufficient basis for identifying and classifying any important-to-safety SSCs to be installed during limited construction.</p> <p><i>LCAR Reference:</i> Section 1.3.1.4, Pre-Assembly of Stainless Steel Liners, of the LCAR states "Based on ISM assessments performed to date, ---- confinement of spilled liquid as a means to reduce operating risk ---- is provided by the concrete structure itself and does not require liners. The ISM process has not identified any potential accidents that could result in damage to the structure extensive enough to negate the confinement function of the concrete structure. Therefore, the stainless steel liners are not designated as ITS."</p> <p><i>Question:</i> What is meant by "ISM assessments performed to date," when it is used in the LCAR? For example, what analysis including assumptions has been performed to ensure that the concrete structure, by itself, will be able to provide the confinement function against any potential spill of liquid inside the cell?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-026-Q</b>	<b>Date Opened: 6/14/01</b>
<b>Place “X” if answering “yes”:</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? _X_	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: J. Yedidia</b>
<b>Description:</b>  <i>Review Guidance:</i> Section D, item 12 of the review guidance requires a list of material types and approximate quantities that will be stored on the site and in the lay-down areas during limited construction activities, including receipt and inspection procedures for ITS SSC materials.  <i>LCAR Reference:</i> Not found  <i>Question:</i> What ITS materials will be procured and stored on the site during limited construction?	
<b>Contractor Response:</b>    	
<b>Disposition:</b>    	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-027-Q</b>	<b>Date Opened: 6/19/01</b>
<b>Place “X” if answering “yes”:</b>  Protection Information? ____  Proprietary Information? ____  Team Accepted? _X_	<b>Date to Contractor: 6/19/01</b>
	<b>Date of Response:</b>
	<b>Date Closed:</b>
	<b>Reviewer: N. Hunemuller</b>
<b>Description:</b>  <i>Review Guidance:</i> Section E.5.3.3 states, "BNI’s described experience qualifications for performing limited construction work activities ensure that the activities can be performed effectively and safely."  <i>LCAR Reference:</i> Section 7.1 provides a list of six locations at which "Bechtel is or has recently provided construction and field services to support the DOE mission of Waste Cleanup with substantial experience in the areas of radiological safety, radiation protection, environmental radiation protection, Quality Assurance, and management controls."  <i>Question:</i> What specific "construction and field services" performed at the listed locations provided "substantial experience" relevant to the LCAR?	
<b>Contractor Response:</b>    	
<b>Disposition:</b>    	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-028-Q</b>	<b>Date Opened: 6/19/01</b>
<b>Place “X” if answering “yes”:</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>  X  </u>	<b>Reviewer: N. Kaushal</b>
<p><b>Description:</b></p> <p><i>Review Guidance:</i> Section D, “Information Required in the LCAR,” states in part “BNI should provide a complete description of LCAR activities for which authorization is requested. This description should include the following:”</p> <p>Item 2 under section D states: “Temporary facilities and services installed under the LCA ...”</p> <p>Item 3 under section D states “Permanent facilities and services installed under the LCA ...”</p> <p><i>LCAR Reference:</i> Activity number 11 in Table 1 is described as “Excavation for other U/G utilities – raw water, potable water, permanent power, site drainage, compressed air, cathodic protection, <b>etc.</b>” (emphasis added).</p> <p><i>Question:</i> What U/G utilities and excavations, other than those explicitly included in the list above, are included in the LCAR scope?</p>	
<b>Contractor Response:</b>	
<b>Disposition:</b>	

<b>Office of Safety Regulation of the River Protection Project Waste Treatment (RPP-WTP) Contractor</b>	<b>OSR Review Team Preliminary Questions for BNI</b>
<b>Question #: 01-LCAR-029-Q</b>	<b>Date Opened: 6/19/01</b>
<b>Place "X" if answering "yes":</b>	<b>Date to Contractor: 6/19/01</b>
Protection Information? ____	<b>Date of Response:</b>
Proprietary Information? ____	<b>Date Closed:</b>
Team Accepted? <u>  X  </u>	<b>Reviewer: L. Miller/J. Polehn</b>
<b>Description:</b>  <i>Review Guidance:</i> Section D, Information Required in the LCAR, item 5 states, "BNI should provide a complete description of all LCAR activities for which authorization is requested. This description should include the following: 5. Engineering and design criteria (including SRD safety criteria) applied to excavations for permanent facilities)...and the basis for selection..."  <i>LCAR Reference:</i> Section 1.3.2.2, Fencing states, "Permanent and temporary fencing will be installed. The permanent fence will be a standard industrial fence per the Safeguard and Security Plan requirements. The fence is to provide protection against damage, destruction, or theft of property....The fencing is therefore not designated as ITS."  <i>Question:</i> With regard to the fencing and its location, how will BNI integrate the fencing and its location into the design criteria to distinguish between the worker and the co-located worker to assure the WTP meets the SRD SC 2.0-1 Radiological Dose Standards?	
<b>Contractor Response:</b>	
<b>Disposition:</b>	